

# KINGSTON RECOVERY PROGRAM MANAGEMENT SITE MONTHLY REPORT

February, 2013

**Aerial Image of Kingston Ash Slide (01/04/2013)**



0 1,000 2,000 3,000 4,000  
Feet

Date of imagery: 01/04/2013

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Tennessee Valley Authority  
Realty, GIS & Land Records

# KINGSTON RECOVERY PROGRAM MANAGEMENT SITE

## MONTHLY REPORT

February, 2013

### **SAFETY**

- Six individuals attended site-specific Health, Safety and Environment (HSE) orientations during February, 2013 – 2,312 project-to-date. Zero site-specific refresher courses were conducted during the month of February, 2013 - 435 project-to-date.
- Seventy-five (75) Safety Observation Reports (SORs) were submitted during February, 2013 – 3,804 year-to-date; 3803 are closed.

### **INFRASTRUCTURE / ASH MANAGEMENT**

- Efforts for site maintenance, dust control, and HAZWOPER control continued.
- Continued recovering cenospheres from the onsite ponds.
- Continued borrow excavation.
- Started Kingston Entrance Restoration project.

### **ASH SLURRY AND POND TOTAL SUSPENDED SOLIDS (TSS) CONTROL**

- Daily total suspended solids (TSS) sampling and pH monitoring were performed throughout the ash slurry system. The TSS of the Main Ash Pond effluent (Agri-Drain outlet) averaged 56.0 mg/L and the Stilling Pond effluent averaged 10.3 mg/L for February, 2013.
- The Ash Pond effluent polymer addition (Agri-Drain location) rates were adjusted based on TSS levels during February, 2013. Ascetic acid was applied to control pH in the Stilling Pond.
- The plant began February, 2013 with 4 units online and ended with 9 units operating.
- Bottom ash was dipped during February, 2013 from the Sluice Trench.

### **PLANT ASH STORAGE / INTERIM ASH STORAGE AREA (BALLFIELD)**

- Trans Ash placed and compacted dry fly ash during February, 2013.
- Geosyntec provided Quality Control and Assurance during February, 2013.
- The Kingston Fossil Plant (KIF) operated from 1 to 9 units during February, 2013 - average of 525.

### **CENOSPHERE CONTROL ACTIVITIES**

- Daily pond inspections were performed for all ponds.
- Collection of cenospheres by hydro-vacuum truck was not carried out in February, 2013. Cenosphere removal is scheduled for February, 2013.

## ROUTINE MONITORING

### Surface Water Sampling

- Continued routine surface water monitoring. All monthly Stilling Pond results received to-date have shown compliance with the outfall National Pollutant Discharge Elimination System (NPDES) permit.
- There were rainfall events on February 10, 22, and 26, 2013 that triggered storm flow sampling in Swan Pond Embayment.
- Automated monitoring stations (Hydrolabs) are online continuously monitoring surface water conditions at 5 locations in the Settling Basin, Clean Water Ditch, Ash Pond Agri-Drains, and Stilling Pond. Continued daily TSS monitoring at the Ash Pond Agri-Drains and Stilling Pond.
- The Surface Water Monitoring Plan has been revised to reflect the relocation of the Settling Basin and the associated Hydrolab and the work to remove ash from the berm of the Clean Water Ditch. A second Clean Water Ditch Hydrolab is being installed at the western section of the ditch where the Settling Basin is being pumped into the Clean Water Ditch.

### Air Sampling

- All air monitoring results for February, 2013 from the PM2.5 TVA air samplers were below the current Ambient Air Monitoring Plan (AAMP) action levels.

### Biota Sampling

- Began installing bird boxes for 2013 tree swallow monitoring.

### Data Management

- Provided monthly surface water and air monitoring results to the U.S. Environmental Protection Agency (EPA).

### Non-Routine Sampling

- Continued sample collection and on-site moisture testing in support of Dredge Cell and Ballfield operations.
- Continued confirmation sampling support for Middle Embayment ash removal.
- Continued spoils runoff sampling from the two tanks of spoils material associated with the Perimeter Wall Stabilization (PWS) project.
- Collected additional hopper ash from Kingston for ongoing University of Colorado research study.

## DREDGE CELL

- Ash stacking resumed after completing a "bridging" layer in the ditch next to Segment 1 and continued as weather permitted.
- Placed rock from Dike 2 and the Settling Basins for construction of a roadbed in the Dredge Cell (to relocate Dike D road).
- Completed widening the Segment 6 platform another 20 feet; placed rock to provide a stable platform for Geo-Con trenching equipment.
- Geo-Con completed pre-drilling / jet grouting for repair of defects and cold joints in Segment 7 and repair of the crack in Segment 8.
- Griffin completed installing outboard deep wells and inboard shallow wells for dewatering of Segment 6.
- S&ME completed coring of defects and cold joint mitigations in Segment 7.
- Stantec submitted the 90% design package for the Segment 5 and 6 Perimeter Containment.
- Stantec submitted the final General Mitigation Plan for repairs of PWS defects.
- Stantec submitted the 60% design for south Dredge Cell cap and closure.



## **LATERAL EXPANSION**

- Ash stacking resumed in the northern part of the Lateral Expansion as weather permitted, but most stacking was deferred to the Dredge Cell.
- A pilot test was performed in the Ash Pond and Lateral Expansion for in-situ lime treatment of stacking subgrade.
- Geo-Con continued to construct the PWS wall in Segments 3 and 4.
- Griffin continued to operate the dewatering system in Segment 4. Near the end of February, the outboard row of wells was dismantled and only the inboard row continued to be operated.
- S&ME resumed coring in Segment 2, once all Segment 1 coring was completed.

## **RIVER SYSTEM RESTORATION**

- Awaiting review of the Removal Action Work Plan (RAWP) for the River System by EPA / TDEC.
- Submitted summary notes and data quality objectives (DQOs) for Long-Term Monitoring (LTM) Plan to regulators for review. Initiated preparation of the full LTM Plan.

## **EMBAYMENT RESTORATION AND RECREATION AREA DEVELOPMENT**

- Began revisions to the Lakeshore Recreation area. The boat ramp proposed for the western side of the East Embayment will now be constructed on the Lakeshore Peninsula. Construction efforts for the boat ramp will remain in the November timeframe.
- Began design efforts for the Berkshire and Borrow areas.

## **MIDDLE EMBAYMENT**

- Ash removal from the Middle Embayment was carried out during February, 2013.
- Weekly Middle Embayment status reports were submitted.
- Rock from T-2 sediment pond was recovered for use in other features.

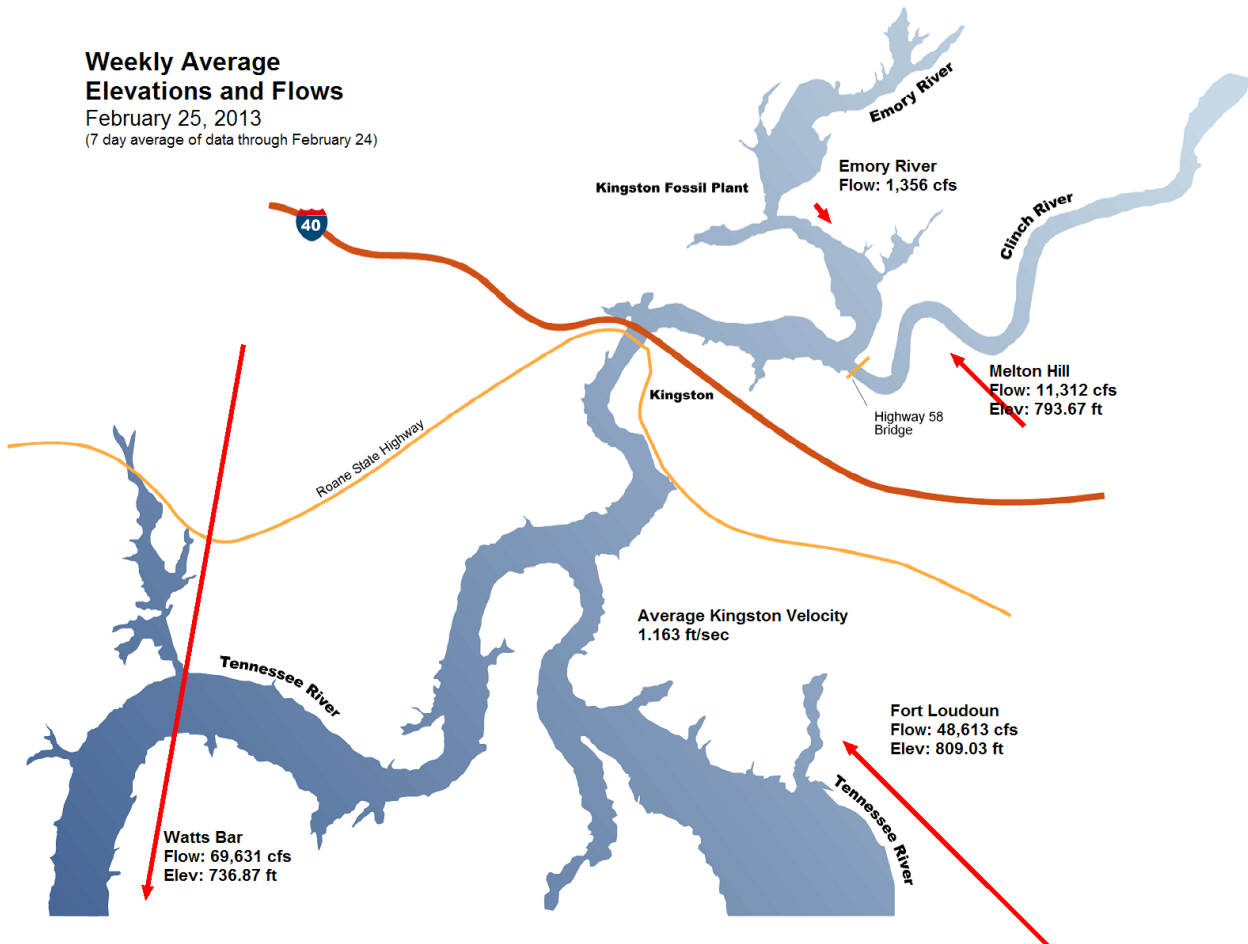
## **OUTREACH / COMMUNICATIONS**

- Added weekly area resident updates to Kingston Ash Recovery (KRP) website.
- Sent weekly updates to the Community Advisory Group (CAG), public officials and members of the public who have signed up to receive weekly emails.
- Distributed a questionnaire to local residents as part of the Community Involvement Plan.
- Construction began on the Kingston Recovery Program Management Site Overlook makeover effort.
- Met with CAG to provide an update on the project.
- Updated administrative records with work plans and relevant documents.
- Continued to respond to calls from residents.
- Updated site bulletin boards.

## RIVER OPERATIONS

### Weekly Average Elevations and Flows

February 25, 2013  
(7 day average of data through February 24)



**PERIMETER WALL STABILIZATION  
SEGMENTS 1, 2, 7, AND 8  
CONSTRUCTION PROGRESS  
AS OF MARCH 2, 2013**

**KEY MAP**

**LEGEND**

- CONSTRUCTION COMPLETED
- MITIGATION
- EPA APPROVED

**NOTE**  
PHASE 1 OF SEGMENT 7 MITIGATION  
COMPLETE AS OF FEBRUARY 2, 2013.

**TEST PARCELS APPROVED TO DATE:**  
SEGMENT 1: TP1, TP10, TP11, TP12, TP13, TP14, TP15,  
TP16, TP21, TP22, TP23, TP24, TP25, TP26, TP27, TP28, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP36, TP37, TP38, TP39, TP40, TP41, TP42, TP43, TP44, TP45, TP46, TP47, TP48, TP49, TP50, TP51, TP52, TP53, TP54, TP55, TP56, TP57, TP58, TP59, TP60, TP61, TP62, TP63, TP64, TP65, TP66, TP67, TP68, TP69, TP70, TP71, TP72, TP73, TP74, TP75, TP76, TP77, TP78, TP79, TP80, TP81, TP82, TP83, TP84, TP85, TP86, TP87, TP88, TP89, TP90, TP91, TP92, TP93, TP94, TP95, TP96, TP97, TP98, TP99, TP100, TP101, TP102, TP103, TP104, TP105, TP106, TP107, TP108, TP109, TP110, TP111, TP112, TP113, TP114, TP115, TP116, TP117, TP118, TP119, TP120, TP121, TP122, TP123, TP124, TP125, TP126, TP127, TP128, TP129, TP130, TP131, TP132, TP133, TP134, TP135, TP136, TP137, TP138, TP139, TP140, TP141, TP142, TP143, TP144, TP145, TP146, TP147, TP148, TP149, TP150, TP151, TP152, TP153, TP154, TP155, TP156, TP157, TP158, TP159, TP160, TP161, TP162, TP163, TP164, TP165, TP166, TP167, TP168, TP169, TP170, TP171, TP172, TP173, 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PWS CONSTRUCTION						QC CONSTRUCTION				DEFECT MITIGATION				QC DEFECT MITIGATION				COLD JUNT MITIGATION				APPROVAL/ CONCURRENCE		COMMENTS
Installed	Cured	Cored	Assessed	Delineated	Field Addendum	Pre-Drilled	Jet Grouted	Cored	Assessed	Pre-Drilled	Jet Grouted	Cored	Assessed	TVA	EPA									
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	90%	90%	18-Oct-2012								
100%	100%	100%	100%	100%	100%	100%	100%	100%	71%	100%	100%	100%	100%	57%	57%	22-Feb-2013								
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	23-Mar-2013								
100%	100%	53%	44%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20-May-2013								

**NOTE**  
PHASE 1 OF SEGMENT 7 MITIGATION  
COMPLETE AS OF FEBRUARY 2, 2013.

**LEGEND**

 COMPLETION CODES: EEN

CONSTRUCTION SCHEMATIC

MITIGATION

NET 4. SUPERNOVA

TEST PARCELS APPROVED TO DATE:

**SEGMENT 1:**  
TP2, TP10, TP11, TP12, TP13, TP14, TP15

SEGMENT 2:  
TP10, TP20, TP22, TP28, TP30, TP31

## SEGMENT 7:

**SEQUENT &**  
**TP001, TP002, TP003, TP004**

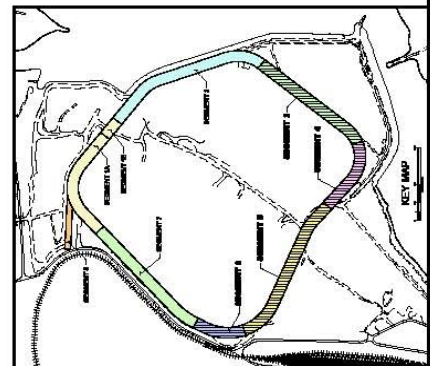
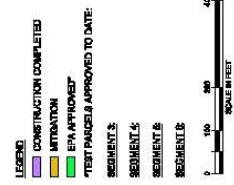
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SCALE IN FEET

20 JOURNAL OF DOCUMENTATION

**PERIMETER WALL STABILIZATION  
SEGMENTS 3, 4, 5, AND 6  
CONSTRUCTION PROGRESS  
AS OF MARCH 2, 2013**

**PWS - Construction and Assessment Status**

	PWS CONSTRUCTION			QC CONSTRUCTION			DEFECT MITIGATION			QC DEFECT MITIGATION			COLD JOINT MITIGATION			APPROVAL/ CONFORMANCE		COMMENTS
	Installed	Cured		Assessed	Delineated	Field Addendum	Pre-Drilled	Jet Grouted		Cored	Assessed		Pre-Drilled	Jet Grouted	Assessed	TVA	EPA	
SEGMENT 4	62%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10-Jul-2013
SEGMENT 3	87%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	06-Aug-2013
SEGMENT 6	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	19-Dec-2013
SEGMENT 5	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	21-Jan-2014



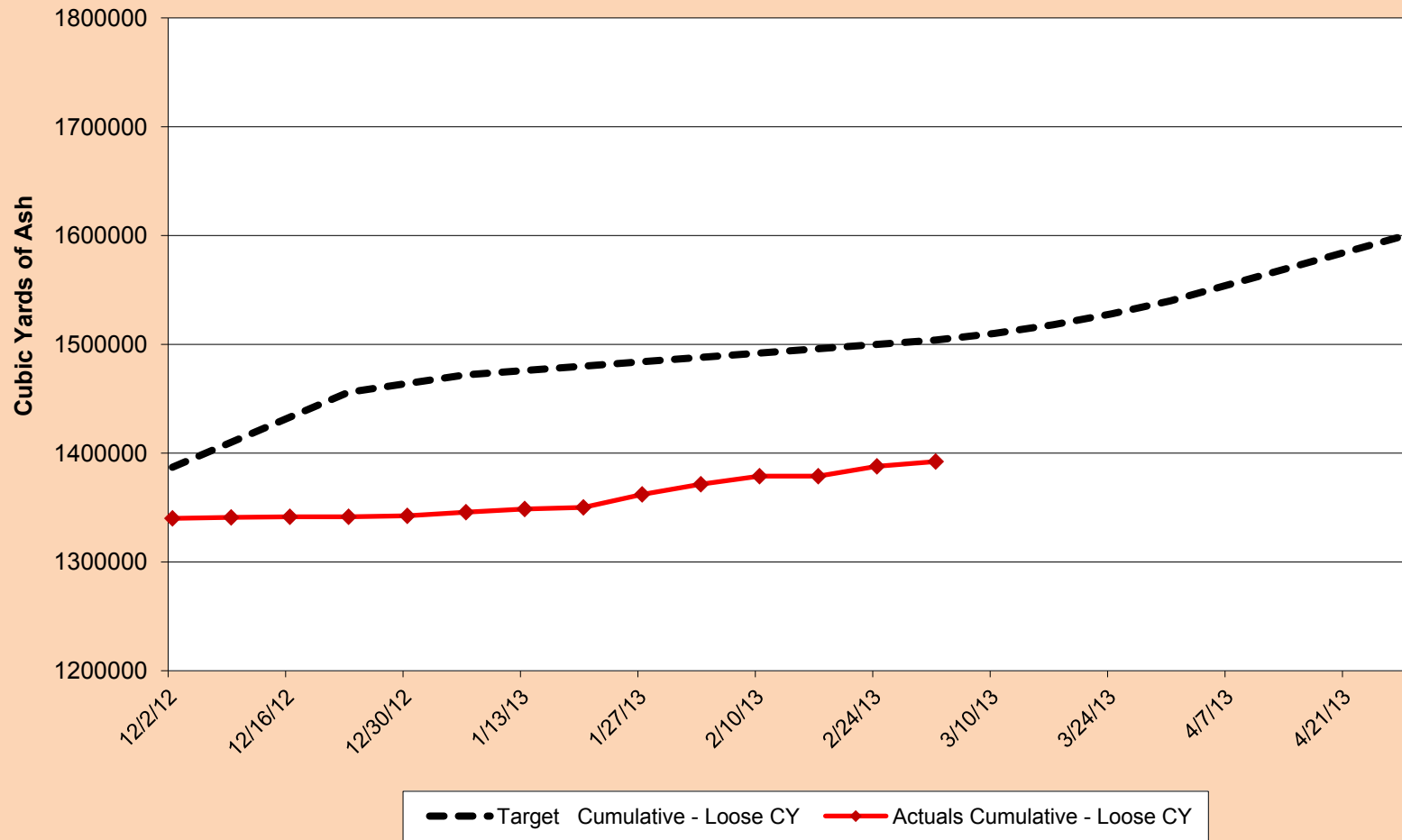
Kingston Recovery Program Management Site			February, 2013	Field Report
Safety			Monthly Total	FY – Cumulative Total
Near Misses			0	0
First Aid Incidents			0	6
Recordable Incidents			0	1
Recordable Lost Time Incidents			0	0
Environmental	Matrix	Samples	Analyses	Results
Organization - TVA	Surface / Utility Water	5,817	48,604	243,389
Organization - TVA	Groundwater (Spring & Well)	263	2,780	13,586
Organization - TVA	Ash	754	1,263	9,281
Organization - TVA	Soil / Sediment	3,774	6,053	36,946
Organization - TVA	Biota	5,456	13,127	139,612

Work Description	Period Work Performed (CYIP)	PTD Work Performed (CYIP)
<b>Ash Removal / Excavation</b>		
Total Removed from Middle Embayment	16,737	997,522
Total Removed from North Embayment	-	1,010,322
Total Removed from Settling Basins / Dike 2	3,556	53,589
Total Removed from Swan Pond Road Corridor	858	858
<b>Excavated Total</b>	<b>21,151</b>	<b>2,062,291</b>
Work Description	Period Work Performed (CCY)	PTD Work Performed (CCY)
<b>Placement</b>		
Total Placed in Dredge Cell	51,334	1,399,166
Total Placed in Lateral Expansion	8,162	624,390
Total Placed in Ash Pond	1,440	394,181
Total Placed in Stilling Pond	-	17,641
<b>Placed Total</b>	<b>60,936</b>	<b>2,417,736</b>
Work Description	Period Work Performed (CCY)	PTD Work Performed (CCY)
<b>Storage Handling</b>		
Total Removed from Lateral Expansion	234	54,446
Total Removed from Dredge Cell	49,029	861,495
Total Removed from Ballfield	13,377	485,425
<b>Removed from Storage Total</b>	<b>62,640</b>	<b>1,401,366</b>
<b>Net Removed to(from) Ballfield Storage</b>	<b>(8,526)</b>	<b>(146,352)</b>

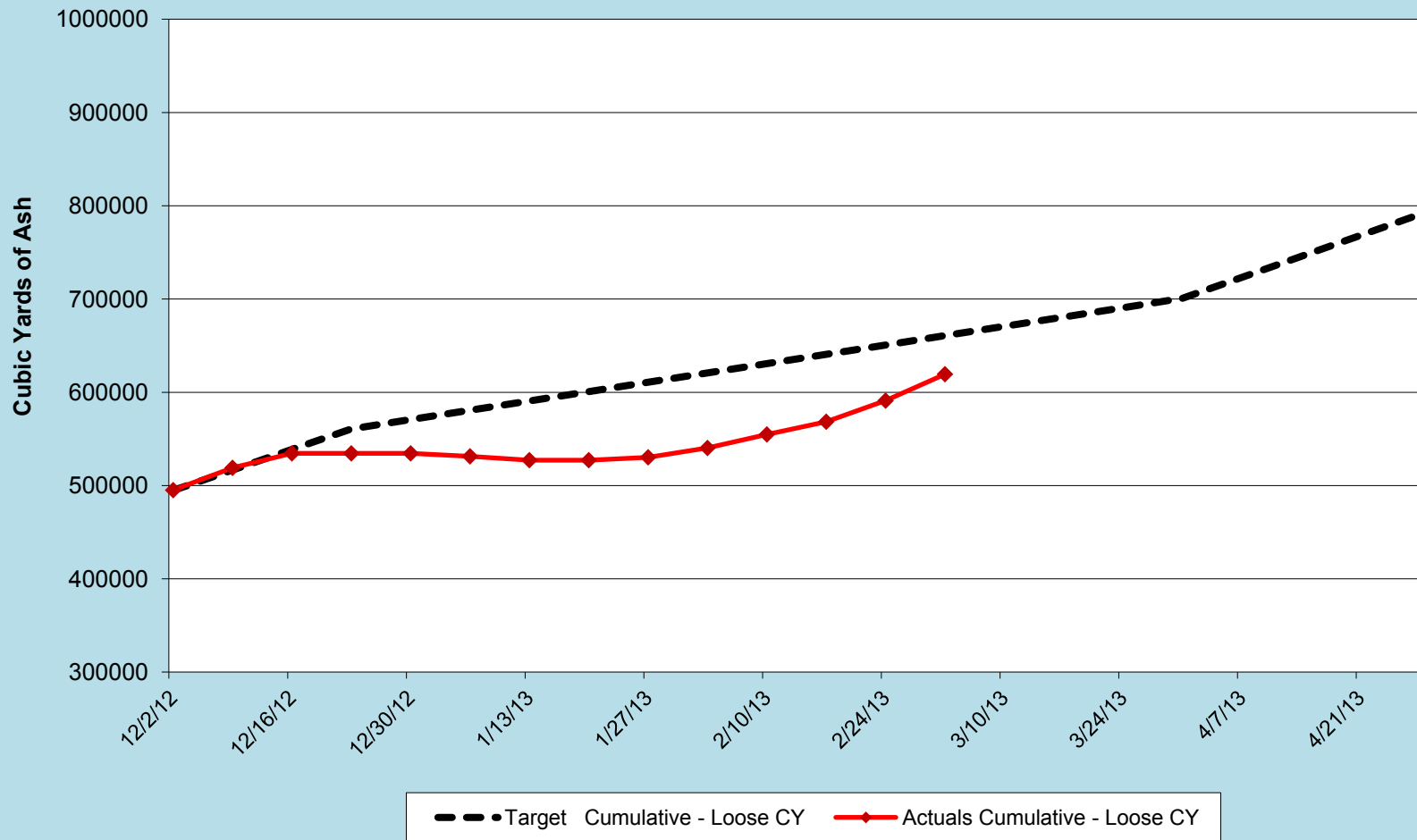
For period ending February 28, 2013.



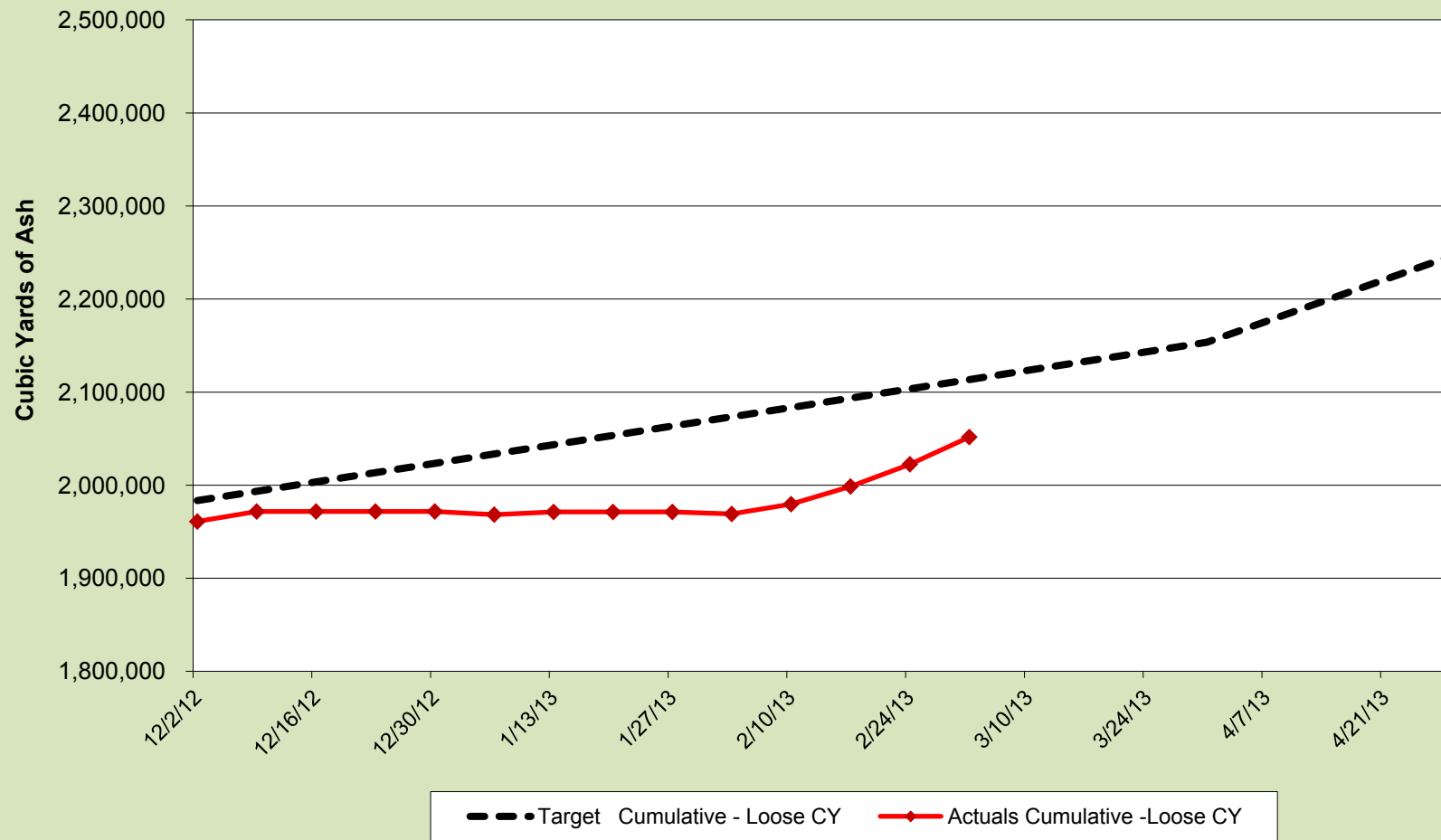
### Ash Excavation from Middle Embayment Weekly as of February 28, 2013



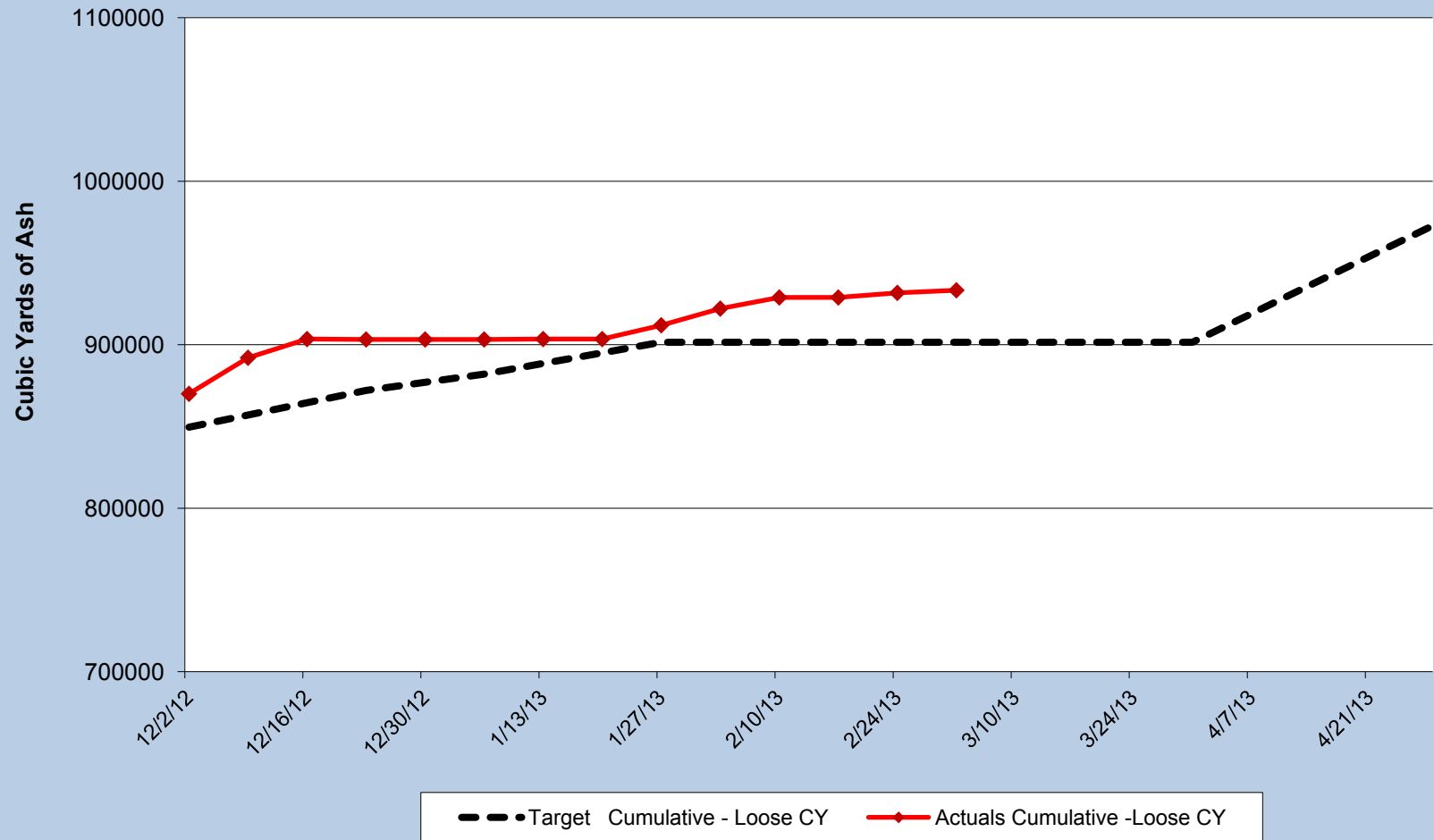
# Ash Excavation from Dredge Cell Relic Weekly as of February 28, 2013



**Ash Stacking in Dredge Cell  
Weekly as of February 28, 2013**



**Ash Stacking in Lateral Expansion  
Weekly as of February 28, 2013**





**Perimeter Wall Stabilization Segments 3 & 4  
Weekly as of February 28, 2013**

